PATENT
5181-83401/P5784DIV

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.:	Unknown	Examiner:	Unknown
Filed:	Herewith	Art Unit:	Unknown
Confirmation No.:	Unknown	Atty. Dkt. No:	5181-83401
Inventor(s):			
Davidson			
Title:	CARBON FOAM HEAT EXCHANGER FOR INTEGRATED CIRCUIT		

CERTIFICATE OF EXPRESS MAIL
UNDER 37 C.F.R. §1.10

"Express Mail" mailing label number: EV317117593US
DATE OF DEPOSIT: June 20, 2003

I hereby certify that this paper or fee is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 C.F.R. §1.10 on the date indicated above and is addressed to:
Commissioner for Patents
Alexandria, VA 22313-1450

Derrick Brown

PRELIMINARY AMENDMENT

Mail Stop Non-Fee Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Please amend the above-captioned application as follows:

In the Claims:

Please amend the claims as follows.

The following lists all claims and their status:

Claims 1-13 (cancelled)

14. (Currently amended): A method of coupling a carbon foam material to an integrated circuit comprising:

coating a carbon foam material with first solder; and
coupling the carbon foam material coated with first solder to the integrated circuit such that thermal energy from the integrated circuit is transferred to the carbon foam material.

15. (Currently amended): The method of claim 14, further comprising cleaning a surface of the integrated circuit ~~is cleaned~~.

16. (Currently amended): The method of claim 14, further comprising cleaning a surface of the integrated circuit by backsputtering the surface of the integrated circuit with an inert gas.

17. (Currently amended): The method of claim 14, further comprising cleaning a surface of the carbon foam material.

18. (Currently amended): The method of claim 14, further comprising cleaning a surface of the carbon foam material by backsputtering with an inert gas.

19. (Currently amended): The method of claim 14, further comprising coating a surface of the integrated circuit with a second solder.

Claims 20-21 (Cancelled)

22. (Currently amended): The method of claim 14, wherein a second solder couples the integrated circuit and the carbon foam material, and wherein the second solder comprises copper, nickel, gold, silver, lead, silicon, indium, bismuth, titanium, tin, or mixtures thereof.

23. (Currently amended): The method of claim 14, wherein coupling the carbon foam material to the integrated circuit comprises coupling the integrated circuit and the carbon foam material with a universal solder.

24. (Currently amended): The method of claim 14, wherein coupling the carbon foam material to the integrated circuit comprises coupling the integrated circuit and the carbon foam material with adhesives.

25. (Currently amended): The method of claim 14, further comprising forming a silicide on a surface of the integrated circuit.

26. (Currently amended): The method of claim 25, further comprising coating a surface of the silicide with an adherent metal.

27. (Currently amended): The method of claim 14, wherein coupling the carbon foam material to the integrated circuit comprises heating the carbon foam material with the integrated circuit in an inert atmosphere furnace.

28. (Currently amended): The method of claim 14, wherein coupling the carbon foam material to the integrated circuit comprises heating the carbon foam material with the integrated circuit in a reducing atmosphere furnace.

29. (Currently amended): The method of claim 14, wherein coupling the carbon foam material to the integrated circuit comprises heating the carbon foam material with the integrated circuit in a vacuum furnace.

30. (Currently amended): The method of claim 14, wherein coupling the carbon foam material to the integrated circuit comprises heating the carbon foam material with the integrated circuit on a hot plate.

Claim 31 (Cancelled)

32. (New): A method of coupling a carbon foam material to an integrated circuit comprising:

applying solder to a surface of a carbon foam material; and

coupling the carbon foam material to the integrated circuit such that thermal energy from the integrated circuit is transferred to the carbon foam material, wherein the solder is disposed between the carbon foam material and the integrated circuit, and wherein the solder is applied to the carbon foam material prior to coupling.

33. (New): The method of claim 32, wherein the carbon foam material is disposed within a chamber.

34. (New): The method of claim 33, further comprising coupling conduits coupled to the

chamber, wherein the conduits are configured to direct a heat exchange fluid into the chamber.

35. (New): The method of claim 32, wherein a depth solder applied to the carbon foam comprises at least two carbon foam ligament diameters into a body of the carbon foam material.

36. (New): The method of claim 32, wherein the solder comprises a reactive braze alloy.

It is believed that no fees are due in connection with the filing of this Preliminary Amendment. However, if any fees are due, the Commissioner is hereby authorized to deduct said fees from Meyertons, Hood, Kivlin, Kowert & Goetzel, P.C. Deposit Account No. 50-1505/5181-83401/EBM.

Respectfully submitted,

Mark R. DeLuca
Reg. No. 44,649

Patent Agent for Applicant

MEYERTONS, HOOD, KIVLIN, KOWERT & GOETZEL, P.C.
P.O. BOX 398
AUSTIN, TX 78767-0398
(512) 853-8800 (voice)
(512) 853-8801 (facsimile)

Date: 6/20/03